

EXHIBIT A

ERICSSON 

Confidential Information
INFORMATION

1 (1)

Uppgjord (Egen teknisk beskrivning om ämnet) - Prepared (Also subject responses if other)		Nr - No.	
EED/R Martina Mertens		EED/RP-98:591	
Delstaten/Kontroll - Doc response/Approved	Kontroll - Checked	Datum - Date	Rev
		1998-10-30	A
		Rev	Rev

Receiver:

EED/X/D Martin Stümpert
EED/X/D Andrew Sharp

CONFIRMATION OF RECEIPT

Dear Inventor!

Herewith we confirm the receipt of your service-invention "Handover of multiple calls from lu interface to A interface (2)", submitted on 30.10.1998. We gave it the internal reference number 98149. Please use this number for further correspondence.

Please inform us if there are any improvements, further developments or changes of your invention in the meantime.

The checking for Ericsson's interest in your invention and its patentability will start immediately. This will probably also include a demonstration of the invention to the local EED patent committee by one of the inventors. If the description or your invention needs to be enhanced we will inform you.

You are of course obliged to keep this invention as a secret to avoid premature publishing of your invention. If there is any publication planned, please inform us as soon as you are aware of it.

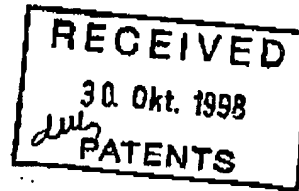
Thank you very much for your innovative achievement!

Best regards,



Martina Mertens

88143



POP2 98-10-23

Martin Stuenkel
Andrew Sharp

[2] Handover of multiple calls from Iu interface to A interface:

Urgent will soon be discussed in standardisation.

State of the art:

In today's GSM networks the MSC has only the possibility to support one call to one subscriber at a time over the A-interface.

Background:

With the introduction of UMTS networks, the need of offering handover from UMTS to GSM arises, as UMTS is expected to be introduced as islands first (see figure below).

Now we have two networks with different capabilities. UMTS supporting multiple calls and GSM not supporting multiple calls down to the mobile.

Enhancement:

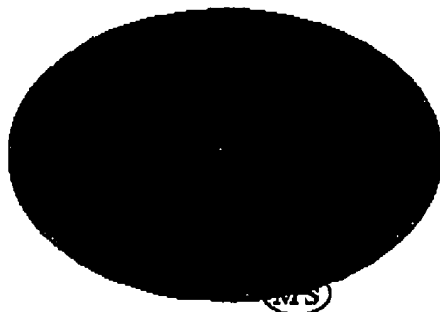
To allow handover from UMTS with multiple calls to GSM, which can only handle one call, an intelligent mechanism is needed to give some sophisticated logic, which call out of the multiple calls to keep.

Note: The UMTS network send the indication of needed handover earlier than the GSM network, as with W-CDMA most of the time, the mobile has more than one physical connection. So, e.g. if only one physical connection to one BS remains in UMTS, the network can indicate this already to the mobile (see figure below).


Invention:

[2] If only one speech call is active, the network keeps the speech call and release the other connections, e.g. internet browsing.

GSM



The mobile has to handover soon to GSM.

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INFORMATION					
Utsigård (även färdigställning om ändring) - Prepared (also subject responsible if other)		Nr. / No.			
EED/R Martina Mertens		EED/RP-98-598			
Dokumentation - Doc response/Approved		Datum - Date		Rev	
		1998-10-30		A	
				Ris	

Receiver:

EED/X/D Martin Stümpert
EED/X/D Andrew Sharp

CONFIRMATION OF RECEIPT

Dear Inventor!

Herewith we confirm the receipt of your service-invention "Handover of multiple calls from lu interface to A interface (3)", submitted on 30.10.1998. We gave it the internal reference number 98150. Please use this number for further correspondence.

Please inform us if there are any improvements, further developments or changes of your invention in the meantime.

The checking for Ericsson's interest in your invention and its patentability will start immediately. This will probably also include a demonstration of the invention to the local EED patent committee by one of the inventors. If the description or your invention needs to be enhanced we will inform you.

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Thank you very much for your innovative achievement!

Best regards,



Martina Mertens

38150

POP3 98-10-23

Martin Sruempert
Andrew Sharp



[3] Handover of multiple calls from In interface to A interface.

Urgent will soon be discussed in standardisation.

State of the art:

In today's GSM networks the MSC has only the possibility to support one call to one subscriber at a time over the A-interface.

Background:

With the introduction of UMTS networks, the need of offering handover from UMTS to GSM arises, as UMTS is expected to be introduced as islands first (see figure below).

Now we have two networks with different capabilities, UMTS supporting multiple calls and GSM not supporting multiple calls down to the mobile.

Enhancement:

To allow handover from UMTS with multiple calls to GSM, which can only handle one call, an intelligent mechanism is needed to give some sophisticated logic, which call out of the multiple calls to keep.

Note: The UMTS network send the indication of needed handover earlier than the GSM network, as with W-CDMA most of the time, the mobile has more than one physical connection. So, e.g. if only one physical connection to one BS remains in UMTS, the network can indicate this already to the mobile (see figure below).

Invention:

[3] The network shall inform mobile user some time before the handover will occur. This can be done by measures between the UMTS BSs and the GSM BSs and by the help of positioning, which will be available in GSM.

The mobile user can then decide to stay inside the UMTS coverage.

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1 (1)

Uppgjord (även faktainväntig om annan) - Prepared (also subject responsible if other)		Nr. No.	
EED/R Martina Mertens		EED/RP-98:597	
Godkänd/Godk - Don respond/Approved	Kontrollerad - Checked	Datum - Date	Rev
		1998-10-30	A

Receiver:

EED/X/D Martin Stämpert
EED/X/D Andrew Sharp

CONFIRMATION OF RECEIPT

Dear Inventor!

Herewith we confirm the receipt of your service-invention "Handover of multiple calls from lu interface to A interface (4)", submitted on 30.10.1998. We gave it the internal reference number 98151. Please use this number for further correspondence.

Please inform us if there are any improvements, further developments or changes of your invention in the meantime.

The checking for Ericsson's interest in your invention and its patentability will start immediately. This will probably also include a demonstration of the invention to the local EED patent committee by one of the inventors. If the description or your invention needs to be enhanced we will inform you.

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Thank you very much for your innovative achievement!

Best regards,


Martina Mertens

98151



POP4 98-10-23

Martin Swempert
Andrew Sharp

[4] Handover of multiple calls from Iu interface to A interface:

Urgent will soon be discussed in standardisation.

State of the art:

In today's GSM networks the MSC has only the possibility to support one call to one subscriber at a time over the A-interface.

Background:

With the introduction of UMTS networks, the need of offering handover from UMTS to GSM arises, as UMTS is expected to be introduced as islands first (see figure below).

Now we have two networks with different capabilities, UMTS supporting multiple calls and GSM not supporting multiple calls down to the mobile.

Enhancement:

To allow handover from UMTS with multiple calls to GSM, which can only handle one call, an intelligent mechanism is needed to give some sophisticated logic, which call out of the multiple calls to keep.

Note: The UMTS network send the indication of needed handover earlier than the GSM network, as with W-CDMA most of the time, the mobile has more than one physical connection. So, e.g. if only one physical connection to one BS remains in UMTS, the network can indicate this already to the mobile (see figure below).

Invention:

[4] The mobile indicates already at call setup, which call it wants to keep during handover.

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Uppgjord (Även teknisk beskrivning om ämnet) - Prepared (also subject responsible if author)		No - Ark.	
EED/R Martina Mertens		EED/RP-98:598	
Dokument/Code - Doc response/Approved	Kontroll - Checked	Datum - Date	Rev
		1998-10-30	A

Receiver:

EED/X/D Martin Stümpert
EED/X/D Andrew Sharp

CONFIRMATION OF RECEIPT

Dear Inventor!

Herewith we confirm the receipt of your service-invention "Handover of multiple calls from lu interface to A interface (5)", submitted on 30.10.1998. We gave it the internal reference number 98152. Please use this number for further correspondence.

Please inform us if there are any improvements, further developments or changes of your invention in the meantime.

The checking for Ericsson's interest in your invention and its patentability will start immediately. This will probably also include a demonstration of the invention to the local EED patent committee by one of the inventors. If the description or your invention needs to be enhanced we will inform you.

You are of course obliged to keep this invention as a secret to avoid premature publishing of your invention. If there is any publication planned, please inform us as soon as you are aware of it.

Thank you very much for your innovative achievement!

Best regards,



Martina Mertens

88152



POP5 98-10-23

Martin Stuempert
Andrew Sharp

[5] Handover of multiple calls from In interface to A interface:

Urgent will soon be discussed in standardisation.

State of the art:

In today's GSM networks the MSC has only the possibility to support one call to one subscriber at a time over the A-interface.

Background:

With the introduction of UMTS networks, the need of offering handover from UMTS to GSM arises, as UMTS is expected to be introduced as islands first [see figure below].

Now we have two networks with different capabilities, UMTS supporting multiple calls and GSM not supporting multiple calls down to the mobile.

Enhancement:

To allow handover from UMTS with multiple calls to GSM, which can only handle one call, an intelligent mechanism is needed to give some sophisticated logic, which call out of the multiple calls to keep.

Note: The UMTS network send the indication of needed handover earlier than the GSM network, as with W-CDMA most of the time, the mobile has more than one physical connection. So, e.g. if only one physical connection to one BS remains in UMTS, the network can indicate this already to the mobile [see figure below].

Therefore the following four solutions are given.

Invention:

[5] If the mobile receives a indication from the network that a handover is needed, it decides to release all calls, which it cannot keep. The information, which call to handover can be stored at the setup in the mobile or specified by the user after he receives indication that a handover is needed.

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1 (1)

Uppgjord (även sekretessverlig om anm.) - Prepared (also subject responsible if other)		Nr - No.	
EED/R Martina Mertens		EED/RP-98:590	
Dokansv/Gesv - Doc response/Approved	Kontroll - Checked	Datum - Date	Rev
		1998-10-30	A

Receiver:

EED/XD Martin Stämpert
EED/XD Andrew Sharp

CONFIRMATION OF RECEIPT

Dear Inventor!

Herewith we confirm the receipt of your service-invention "Handover of multiple calls from lu interface to A interface (1)", submitted on 30.10.1998. We gave it the internal reference number 98148. Please use this number for further correspondence.

Please inform us if there are any improvements, further developments or changes of your invention in the meantime.

The checking for Ericsson's interest in your invention and its patentability will start immediately. This will probably also include a demonstration of the invention to the local EED patent committee by one of the inventors. If the description or your invention needs to be enhanced we will inform you.

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Thank you very much for your innovative achievement!

Best regards,



Martina Mertens

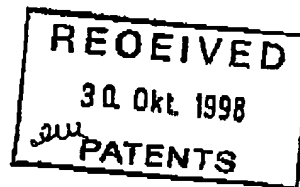
7-11 Nov. 98

98148

POP1 98-10-23

Martin Stumppert
Andrew Sharp

EEJIXID mart 333 3351
EEJIXID disp 964 3333



(1) Handover of multiple calls from Iu interface to A interface: (1)

Urgent will soon be discussed in standardisation.

State of the art:

In today's GSM networks the MSC has only the possibility to support one call to one subscriber at a time over the A-interface.

Background:

With the introduction of UMTS networks, the need of offering handover from UMTS to GSM arises, as UMTS is expected to be introduced as islands first [see figure below].

Now we have two networks with different capabilities. UMTS supporting multiple calls and GSM not supporting multiple calls down to the mobile.

Enhancement:

To allow handover from UMTS with multiple calls to GSM, which can only handle one call, an intelligent mechanism is needed to give some sophisticated logic, which call out of the multiple calls to keep.

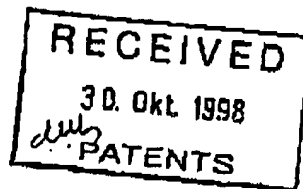
Note: The UMTS network send the indication of needed handover earlier than the GSM network, as with W-CDMA most of the time, the mobile has more than one physical connection. So, e.g. if only one physical connection to one BS remains in UMTS, the network can indicate this already to the mobile [see figure below].

Invention:

[1] The network sends an indication over Iu to ask the mobile, which of the calls it wants to keep. As the network for UMTS and for GSM is connected, it indicates down the calls, which the user can keep at handover towards GSM, so that the user can choose out of this set.

Upon this indication from the UMTS network, the mobile specifies and signals back to the network,
• that handover shall not be done, so the user will stay in UMTS coverage and can keep all his calls.
• which call he wants to keep.

38149.



POP2 98-10-23

Martin Stuempert
Andrew Sharp

[2] Handover of multiple calls from Iu interface to A interface:

Urgent will soon be discussed in standardisation.

State of the art:

In today's GSM networks the MSC has only the possibility to support one call to one subscriber at a time over the A-interface.

Background:

With the introduction of UMTS networks, the need of offering handover from UMTS to GSM arises, as UMTS is expected to be introduced as islands first (see figure below).

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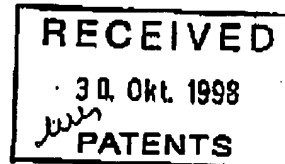
Invention:

[2] If only one speech call is active, the network keeps the speech call and release the other connections, e.g. internet browsing.

38150

POP3 98-10-23

Martin Stumpert
Andrew Sharp



(3) Handover of multiple calls from Lu interface to A interface:

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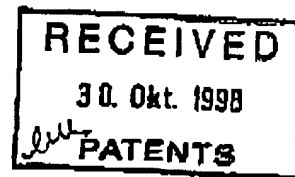
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Invention:

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The mobile user can then decide to stay inside the UMTS coverage.

88151



POP4 98-10-23

Martin Stumpert
Andrew Sharp

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State of the art:

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Invention:

[4] The mobile indicates already at call setup, which call it wants to keep during handover.

98152



POP5 98-10-23

Martin Stuenkel
Andrew Sharp

[5] Handover of multiple calls from In interface to A interface:

Urgent will soon be discussed in standardisation.

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